

REMARKS

Claims 21-36 are pending in this application. Claims 21 through 36 have been newly added. Claims 1 through 20 have been canceled without prejudice or disclaimer of its subject matter.

I. Claim Objections

The Examiner stated that Claims 11 and 19 are objected to because of the following informalities:

In claim 11, the Applicant uses “a caller identification” on page 23, line 4. The Examiner suggests using “said caller identification” since the claimed limitations have been used in claim 11. In claim 19, the Applicant uses “a computer-readable medium”. The Examiner suggests using “the computer-readable medium” since the claimed limitations have been used in claim 18. Appropriate correction is required.

Claims 11 and 19 were cancelled and the new claims were checked to avoid the above objections.

II. Claim Rejections - 35 USC § 112

The Examiner states that in claim 1 the applicant recites the limitations “each of the subscribers”, in claim 2 the applicant recites the limitations “the extension subscriber” and in claims 3 and 4 the applicant recites the limitation “the extension subscribe”, “said mobile

communication terminal” and “the mobile communication terminal service” however, there are insufficient prior antecedent basis for these limitations in the claims.

Claims 1-4 were cancelled and the new claims were checked to avoid the above objections.

III. Claim 21 as related to 35USC§102 and 35USC§103.

Claim 21 is not anticipated or obvious based on the prior art of record.

1. Virtual telephone number

One of the differences between the present invention and Fuentes (US 5,960,340) is the concept of the telephone number used in the system. The telephone number used in the system is not taught or suggested by Fuentes. In Fuentes, the universal telephone number starting (700) is used, which is descriptor for the new service. In the present application, however, the wired telephone number is granted to the mobile terminal. The wired telephone number is the number registered in the central office of the PSTN. For the above reason, it is named “virtual telephone number.” If the service of the present application is used, there is no need to change part of the public network. On the contrary, when Fuentes is used, part of the public network has to be changed.

In addition, Cyr (U.S. 6,223,055), Gillespie (US 6,014, 377), Tiliks (US Publication 20020077098), alone or in combination, also fail to teach or suggest the limitations of the claimed amendment.

2. Group Exchange

There is the group exchange in claim 21, that is another distinct element that is not taught or suggested by the prior art. The group exchange is able to communicate the mobile terminal in the mobile zone that is the control region of the pBSC. Simultaneously, the group exchange is able to communicate the wired terminal out of the mobile zone. The element having the above characteristics could not be found in the prior arts including Fuentes (US 5,960,340), Cyr (U.S. 6,223,055), Gillespie (US 6,014, 377), and Tiliks (US Publication 20020077098), alone or in combination.

3. Wired/Mobile Interconnecting Service

The examiner states that the prior art shows the mechanism of the simultaneous receiving action. Specifically, the Examiner states that Fuentes teaches making a call to the corresponding public mobile communication terminal through a mobile communication network (cell site 10) when there is public mobile communication terminal to be called simultaneously interconnectively to the wired phone number (user of the telephone 48 can receive call at mobile unit 1, via the universal number 700-555-1234, see column 4, lines 3-30).

However, according to claim 21, the wired/mobile interconnection service offers mobility to the wired phone service as the claim states “provides a public wired phone service to the mobile communication terminals using the virtual wired phone numbers, and provides a wired

phone service to a wired terminal existing outside the mobile zone”. Furthermore, the present invention states that the private BSC is connected with the public switched telephone network and private BTS to provide such mobile communication to the mobile terminal. Thereby, the present invention accommodates the wired and mobile interconnection service which offers the mobility to the wired phone service, which the references of record do not.

As seen in col. 4 of Fuentes, “According to this invention, during the autonomous registration of the mobile unit, which occurs automatically at power on of the mobile unit ... sending a registration message to universal telephone service 52, which includes the telephone number of mobile telephone 1 (which, advantageously, is the same number as the universal number, i.e., 700-555-1234)... select one of a plurality of "guest" or alias telephone numbers...As a result, PBX 30 can route incoming calls through protocol converter 20, and sets up a call to mobile unit 1.” However, the simultaneous receiving action and the setup of the call to the mobile unit does not teach or suggest wired/mobile interconnection service offering mobility to the wired phone service as the claimed.

The Examiner also mentioned that Cyr teaches of a wireless base station 130, that is couplable to the PBX to simultaneously ring both the wired extension 150 and the associated wireless terminal 120 (see column 3, lines 30-61 and column 4, lines 25-58 and Fig. 1; whereby the in-building communication system is associated with “private mobile communication terminal”). However, again Cyr fails to provide assigning virtual wired phone numbers to mobile terminal existing in a mobile zone, where there is provided a public wired phone service to the mobile terminals using the virtual wired phone numbers and providing the wired phone

service to a wired terminal outside the mobile zone and the interconnection between the wired and mobile services that offers the mobility to the wired phone service. Therefore, any combination of Cyr and Fuentes fails to teach such a limitation. Furthermore, Gillespie (US 6,014, 377), and Tiliks (US Publication 20020077098), alone or in combination fail to teach such a limitation.

IV. 35USC§103 rejections

A. Claims 1-8, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fuentes (U.S. 5,960,340), (hereinafter Fuentes) in view of Cyr (U.S. 6,223,055), (hereafter Cyr).

1. Regarding claim 1, the Examiner states that Fuentes discloses performing wired (telephone call to telephone 48) and wireless service (telephone call made to mobile unit 1) registrations in each of the extension subscribers (call to from telephone 56 to telephone 48 via PBX 30) by endowing at least one of a plurality of wired terminals (telephone 48) and public mobile communication terminals (cell sites, see column 1, lines 53-67) with a wired phone number in accordance with a subscriber registration application (telephone 48 and the mobile unit 1 both uses the same universal telephone number 700-555-1234, see column 3, line 51 - column 4, line 30 and column 1, line 53 - column 2, line 27; i.e., the universal telephone number have to be initially registered beforehand for it's usage, therefore the registration process is an inherent step in Fuentes's).

However, specifically, Fuentes fails to teach endowing the mobile terminal with a virtual wired phone number and providing wired phone service to the wired terminal that is outside the mobile zone as mentioned for example in new claims 21, 27, 30. Fuentes only mentions the idea of a universal number. In fact in col. 4, lines 20-21, in the example, the universal number is the same as the mobile number, rather than the wired number. As mentioned in col. 4, lines 30-40, when the mobile terminal is shutoff then the route is changed to another phone or voice mail, but the number itself is not the wired number, nor is there such a teaching specifically.

Cyr does not mention any further relevant teaching.

2. The Examiner states that Fuentes teaches making a call to a wired terminal corresponding to the corresponding wired phone number when an arbitrary wired phone number is called (wired phone call from telephone 56 to telephone 48 via PBX 30, see column 3, line 51 - column 4, line 2 and Fig. 1) and making a call to the corresponding public mobile communication terminal through a mobile communication network (cell site 10) when there is public mobile communication terminal to be called simultaneously interconnectively to the wired phone number (user of the telephone 48 can receive call at mobile unit 1, via the universal number 700-555-1234, see column 4, lines 3-30).

However, in the present invention, new claim 24 states, “the group exchange simultaneously calls the wired terminal corresponding to the wired phone number and the mobile communication terminal when the wired phone number registered with the multiple terminating service is called”.

On the other hand, as seen in col. 4, lines 13-30, states that "According to this invention, during the autonomous registration of the mobile unit, which occurs automatically at power on of the mobile unit ... protocol converter 20 sends a message over a new data link 60 to signaling network 54, sending a registration message to universal telephone service 52, which includes the telephone number of mobile telephone 1 (which, advantageously, is the same number as the universal number, i.e., 700-555-1234). Protocol converter 20, 8 and the other protocol converters connected to PBX 30, in conjunction with PBX 30, select one of a plurality of "guest" or alias telephone numbers... These numbers are recognized by PSTN 46 to route calls to PBX 30. PBX 30 keeps a table of which mobile unit is assigned which guest number. As a result, PBX 30 can route incoming calls through protocol converter 20, and sets up a call to mobile unit 1." There is no actual teaching or suggestion of *the group exchange simultaneously calls the wired terminal corresponding to the wired phone number and the mobile communication terminal when the wired phone number registered with the multiple terminating service is called* as claimed in the present invention. The condition of when the mobile terminal to be called simultaneously interconnectively to the wired number is not taught or suggested. Fuentes, mentions the routing to the mobile terminal when the terminal is on and then routing to a default device when the mobile terminal is registered is off, but this is not the teaching of claimed invention.

3. The Examiner states that Fuentes fails to teach private mobile communication terminal, but that Cyr teaches of simultaneously ringing both the wired extension 150 and the associated wireless terminal 120 (see column 3, lines 30-61 and column 4, lines 25-58 and Fig.

1; whereby the in-building communication system is associated with “private mobile communication terminal”).

However, as mentioned in claim 24, the group exchange does make such simultaneous calls to the mobile and wired terminal when the wired phone number registered with the multiple terminating service is called.

Cyr mentions ringing both the wireless and wired extensions, but there is no teaching differentiating the calling to the wired terminal when a number is called and making a call to the mobile terminal when such terminal is called simultaneously interconnectively to the wired phone number.

4. The Examiner states that Fuentes further discloses registering the wired phone number (universal telephone number 700-555-1234 for telephone 48, see column 3, line 51 - column 4, line 51) with which the wired terminal constructing an extension network is endowed, the wired phone number with which the public mobile communication terminal is endowed (mobile unit 1 has the same number as the universal telephone number for telephone 48, see column 3, line 51 - column 4, line 51), and a mobile identifier number (equipment identification number EIN, see column 4, lines 52-65) with which the public mobile communication terminal is endowed from the public mobile communication network in a database as extension subscriber information (database search and the transfer of an universal number service from a primary number to a mobile unit, see column 4, lines 31-51).

In the present invention, for example in new claim 25, the pBSC includes a database for storing the virtual wired phone number assigned to each of the mobile communication terminals and a mobile identifier MIN) of the mobile terminal corresponding to the virtual wired phone number.

However, as mentioned above, Fuentes does not teach the universal number being the wired phone number that is virtual.

In addition, according to Col. 4, lines 35-37, Fuentes teaches of “changes the database from the telephone number of the mobile unit 1 to a default number” rather than registering the virtual wired number with the wireless terminal. The registration of the phone number from the mobile unit is changed to the default number in Fuentes which is not teaching the claimed invention.

Further, new claim 23 includes storing in a database indication of whether each of the wired phone numbers is a virtual phone number and if the multiple terminating service is registered. However, Fuentes does not indicate whether the stored numbers are virtual or not. Rather, Fuentes teaches of storing a universal number.

B. Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fuentes in view of Cyr and further in view of Gillespie (U.S 6,014,377), (hereafter Gillespie)

1. The Examiner states that Fuentes discloses registering second identification (EIN) indicating whether the wired phone number (universal telephone number 700- 555-1234) uses a multiple terminating service or not, and a wired phone number of the public and private mobile communication terminal which is called by the multiple forwarding function in said database (see column 4, lines 11-51).

However, looking at col. 4, lines 11-51, there is no teaching or suggestion concerning multiple *terminating* service.

In new claim 23, there is a claim of whether or not a multiple terminating service is registered or not.

Not mentioned by the Examiner, in col. 5, line 55- col. 6, line 19 relating to figure 4 concerns terminating a mobile unit. However, again, there is no teaching or suggestion of multiple terminating service.

2. The Examiner states that the combination of Fuentes and Cyr fail to teach first identification information indicating whether an arbitrary wired phone number is a number which is connected to a terminal or a number which is not connected to a terminal.

However, the Examiner states that Gillespie teaches first identification (Mobile Identification Number) information indicating whether an arbitrary wired phone number is a number (each subscriber's single PBX number, see column 7, line 45 - column 8, line 9) which is connected to a terminal or a number which is not connected to a terminal.

However, according to col. 7, line 66-col. 8, line 1, Gillespie on the other hand teaches information as to whether the subscriber is currently registered in the wireless network, rather than if the number is virtual or not.

On the other hand, in the present invention, as seen for example in new claim 23, information is stored for each of the arbitrary numbers of whether it is virtual or not.

3. The Examiner states that Gillespie teaches transmitting the wired phone number with which the corresponding public and mobile communication terminal is endowed using a caller identification, when the private mobile communication service is used as a result of the determination (routing of call to the a wireline, see column 2, lines 28-40).

However, in Gillespie there is no differentiation between a public and private mobile terminal, a wired phone number and a private *mobile* communication service as arranged in the claim. Instead, as seen in col. 2, lines 28-40, a call is directed to the PBX network number from outside and the call is routed to a wireline switch, a generation of a query at the wireline switch for receipt of the wireline SCP upon detection of predetermined PBX triggers.

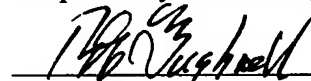
On the other hand as seen in claim 21, the group exchange provides a public wired phone service to the mobile communication terminals using the virtual wired phone numbers and also

of providing a wired phone service to a wired terminal when outside the mobile zone. Such a differentiation is not made in Gillespie.

In view of the foregoing amendments and remarks, all claims are deemed to be allowable and this application is believed to be in condition to be passed to issue. If there are any questions, the examiner is asked to contact the applicant's attorney.

A fee of \$450.00 is incurred by filing a petition for two (2) month extension of time. Applicant's check drawn to the order of the Commissioner accompanies this Amendment. Should there be a deficiency in payment, or should other fees be incurred, the Commissioner is authorized to charge Deposit Account No. 02-4943 of Applicant's undersigned attorney in the amount of such fees.

Respectfully submitted,


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Folio: P57026
Date: 5 October 2006
I.D.: REB/SS